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EXAMINER

LUK, LAWRENCE W

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/833,884

Applicant(s)

SUZUKI ET AL.

Examiner

Lawrence W. Luk

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-33,35,37-40,44-61,66,68-73 and 77-101 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 86-95 and 99-101 is/are allowed.
- 6) ☒ Claim(s) 22-33,35,37,38,44-53,66 and 68-71 is/are rejected.
- 7) ☒ Claim(s) 39,40,54-61,72,73,77-85,97 and 98 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 22, 26-28, 44, 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Miller et al. (5,818,197).

Claim 22

As to claim 22, Matsuda disclose in figure 1 and 2, a rechargeable battery charging apparatus which comprises; a charger (**see column 1, lines 60-61**), which is either built into a personal computer or connected directly or indirectly thereto, whereby an internal power supply source of said personal computer (**20**) is used as a power supply for said charger in a charging operation for said rechargeable battery (**30**), and wherein said charger having built into it a charging processing operation program required for charging of said rechargeable battery (**30**) wherein a charging operation is performed by executing said charging processing operation program selected for said rechargeable battery(**30**) to be charged with utilizing an electric power supplied from said internal power supply source (**301, figure 3**) of said personal computer (**20**); a battery holding apparatus (**30, mobile phone**) which holds at least single rechargeable battery to be charged and connected directly or indirectly (**USB cable 10**) to said charger; a display means connected to said personal computer and displaying at least

one information (**column 1, lines 40-45**) selected from a group consisting information related to a rechargeable battery to be charged, information related to conditions required for charging said rechargeable battery to be charged and information related to past and current charging situation or results of said charging operation (**see paragraph bridging column 1 and 2**); and an input means connected (**2**) to said personal computer (**20**) and for inputting information at least about said respective rechargeable battery to be charged necessary to execute said charging processing operation program (**12**) into a controller (**15**) provided in personal computer (**20**) (**see column 1, line 65 to column 2, line 31**).

Matsuda fails to teach **wherein said rechargeable battery charging processing operation program executes high-speed charging processing, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C.**

Miller et al. disclose in column 2, lines 21-28, wherein said rechargeable battery charging processing operation program executes high-speed charging processing (**see column 2, lines 21-23**), and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C (**see column 2, lines 23-28**).

Matsuda and Miller et al. are analogous art because they are from same field of endeavor of the rechargeable batteries are used in laptop computers.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include said rechargeable battery charging processing operation

program executes high-speed charging processing, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C.

The suggestion/motivation for doing so would have been to provides the methods of fast charging are inadequate for charging batteries in a wide range of capacities. (**see column 2, lines 59-61 of Miller et al.**).

Therefore, it would have been obvious to combine Miller et al. with Matsuda for the rechargeable battery charging processing operation program executes charging with a charging current of at least 2C to obtain the invention as specified in claim 22.

Claim 26

As to claim 26, Matsuda in view of Miller et al. are applied supra, and Matsuda further disclose in figure 1 and 2, wherein said charger automatically (**see figure 3, 307**) selects a charging processing operation program having the most suitable charging processing condition to said rechargeable battery to be charged, among a plurality of charging processing operation programs stored in said charger utilizing information about the rechargeable battery to be charged and distinguished by said personal computer (20) , its-self or separate information about the rechargeable battery (30) to be charged which is input into said personal computer by a user utilizing said inputting means. (**see column 1, line 65 to column 2, line 31**).

Claim 27

As to claim 27, Matsuda in view of Miller et al. are applied supra, and Matsuda further disclose in figure 1 and 2, wherein information regarding a rechargeable battery

requiring charging processing and inserted into said battery holding apparatus is displayed on a display means of said personal computer. **(see column 1, lines 27-28 and lines 40-45).**

Claim 28

As to claim 28, Matsuda in view of Miller et al. are applied supra, and Matsuda further disclose in figure 1 and 2, wherein a user uses an appropriate input means associated with said personal computer to input information regarding a rechargeable battery requiring charging processing inserted in said battery holding apparatus, said information being displayed on a display means of said personal computer. **(see column 1, lines 27-28 and lines 40-45).**

Claim 44

As to claim 44, Matsuda disclose in figure 1 and 2, a charging system comprising: a personal computer **(20)** comprising an internal power supply circuit; a charger using said internal power supply circuit of said personal computer **(20)** as a power supply for said charger in a charging operation and which is provided with a built-in charging processing operation program suitable for performing a charging operation for charging a respective rechargeable battery to be charged; a display means **(see column 1, lines 40-49)** connected to said personal computer and displaying at least one information selected from a group consisting information **(2, D+ and D-)** related to a rechargeable battery **(30)** to be charged, information related to conditions required for charging said rechargeable battery to be charged and information related to past and current charging situation or results of said charging operation **(see column 2, lines 15-**

32); a controller for causing said personal computer to drive; a battery holding apparatus **(30)** which holds at least single rechargeable battery to be charged and connected to said charger **(see column 1, lines 61-62)**; an input means **(2)** connected to said personal computer **(20)** and for inputting information at least about said respective rechargeable battery **(30)** to be charged necessary to execute said charging processing operation program into said controller of said personal computer; and an external power supply means for driving said personal computer, and wherein said system further comprising a battery holding apparatus **(30)** connected directly or indirectly to said charger, said battery holding apparatus includes either a holder part configured so as to enable acceptance and a charging processing operation **(11, 12)** separately on one or a plurality of rechargeable battery of various sizes requiring charging processing, or a stand part configured so as to enable acceptance and a charging processing operation of a plurality of rechargeable battery to be charged of the same size packaged within a prescribed pack, or directly of a cellular telephone with said pack built thereinto. **(see column1, lines 65 to column 2, line 31).**

Matsuda fails to teach **wherein said rechargeable battery charging processing operation program executes high-speed charging processing, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C.**

Miller et al. disclose in column 2, lines 21-28, wherein said rechargeable battery charging processing operation program executes high-speed charging processing **(see column 2, lines 21-23)**, and further wherein said rechargeable battery charging

processing operation program executes charging with a charging current of at least 2C **(see column 2, lines 23-28)**.

Matsuda and Miller et al. are analogous art because they are from same field of endeavor of the rechargeable batteries are used in laptop computers.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include said rechargeable battery charging processing operation program executes high-speed charging processing, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C.

The suggestion/motivation for doing so would have been to provides the methods of fast charging are inadequate for charging batteries in a wide range of capacities. **(see column 2, lines 59-61 of Miller et al.)**.

Therefore, it would have been obvious to combine Miller et al. with Matsuda for the rechargeable battery charging processing operation program executes charging with a charging current of at least 2C to obtain the invention as specified in claim 44.

Claim 66

As to claim 66, Matsuda in view of Miller et al. are applied supra, and Matsuda disclose in figure 1-3, wherein said charger performs control of current from an internal power supply circuit of said personal computer **(20)** in accordance with said charging processing operation program **(see figure 3, 306-311)**, so as to execute charging processing with respect to a rechargeable battery requiring charging processing.

Claim 68

As to claim 68, Matsuda disclose in figure 1 and 2, a rechargeable battery charging method wherein a charger to which is connected either a holder part configured so as to enable acceptance and a charging processing operation separately on one or a plurality of rechargeable battery of various sizes requiring charging processing, or a stand part configured so as to enable acceptance and a charging processing operation of a cell package in that a plurality of rechargeable battery of the same size packaged within a prescribed pack, or directly of a cellular telephone with said pack built thereinto, is either built into a personal computer or connected externally thereto (**see figure 1**), wherein an internal power supply circuit of the personal computer (**20**) is used as a power supply for said charger (**see column 1, lines 60-61**) in a charging operation, and wherein said charger connected to said internal power supply circuit of said personal computer (**20**) having built into a charging processing operation program required for charging of said rechargeable battery (**30**) wherein a charging operation is performed by executing said charging processing operation program selected for said rechargeable battery to be charged with utilizing an electric power supplied from said internal power supply circuit of said personal computer (**20**), while displaying at least either one of information related to said rechargeable battery to be charged or information related to said charging condition of said charging operation as being carried out on a display means connected to said personal computer (**see column 1, lines 40-45**), and further wherein said charger connected to said internal power supply circuit of said personal computer is connected to a signal output terminal

of said personal computer or is connected to said signal output terminal being either directly or indirectly, via an appropriate connector and/or cable, so that a charging processing operation on a rechargeable battery is performed, and further wherein either the rechargeable battery holder part or stand part is formed so as to match the dimensions or shape of each individual rechargeable battery. **(see column 1, line 65 to column 2, line 31).**

Matsuda fails to teach **wherein said rechargeable battery charging processing operation program executes high-speed charging processing, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C.**

Miller et al. disclose in column 2, lines 21-28, wherein said rechargeable battery charging processing operation program executes high-speed charging processing **(see column 2, lines 21-23)**, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C **(see column 2, lines 23-28).**

Matsuda and Miller et al. are analogous art because they are from same field of endeavor of the rechargeable batteries are used in laptop computers.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to include said rechargeable battery charging processing operation program executes high-speed charging processing, and further wherein said rechargeable battery charging processing operation program executes charging with a charging current of at least 2C.

The suggestion/motivation for doing so would have been to provides the methods of fast charging are inadequate for charging batteries in a wide range of capacities. **(see column 2, lines 59-61 of Miller et al.).**

Therefore, it would have been obvious to combine Miller et al. with Matsuda for the rechargeable battery charging processing operation program executes charging with a charging current of at least 2C to obtain the invention as specified in claim 68.

3. Claims 23, 45-47 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Miller et al. (5,818,197) as applied to claim 22 above, and further in view of Toyosato (6,532,482).

Claims 23, 45 and 69

As to claims 23 and 69, Matsuda in view of Miller et al. disclose the elements as claimed except Matsuda in view of Miller et al. fails to teach the limitation of **wherein said charging processing operation program included in said charger is either built into said personal computer by inserting a floppy disk, a CD-ROM, or an IC card containing said charging processing operation program into a prescribed location of said personal computer, or by inserting a PCI board onto which an IC chip containing said charging processing operation program has been mounted into an expansion slot of said personal computer or by using a personal computer hard disk (HD) onto which said charging processing operation program has been installed.**

Toyosato disclose in figure 1, an apparatus that forms the charger which is selected from a group consisting of an international PCI (personal computer interface) standard selecting from either one of a PCI board or PCI card each including said charging processing operation program therein, an IC chip mounted on an expansion board or the like, a CD-ROM, a floppy disk, an IC card each including said charging processing operation program therein and a personal computer hard disk (HD) onto which said charging processing operation program has been installed. **(see column 3, lines 52-53 and column 6, lines 11-23).**

Matsuda, Miller et al. and Toyosato are analogous art because they are from the same field of endeavor a computer system includes a battery charger for charging the battery.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to selecting from either one of a PCI board or PCI card each including said charging processing operation program therein.

The suggestion/motivation for doing so would have been to provides a simple, practical and efficient method for controlling the power generation of a body-worn computer.

Therefore, it would have been obvious to combine Toyosato with Matsuda and Miller et al. for the benefit of selecting from either one of a PCI board or PCI card each including said charging processing operation program to obtain the invention as specified in claims 23, 45 and 69.

Claim 46

As to claim 46, Matsuda, Miller et al. in view of Toyosato are applied supra, and Matsuda further disclose wherein said charger (**see column 1, lines 60-61**) is connected detachably to any one of output terminals (**21**) of said internal power supply circuit of said personal computer (**20**), and is further connected either directly or indirectly (**USB cable 10**), by an appropriate connector (**3**) and/or cable to said battery holding apparatus (**30**). (**see column 1, line 65 to column 2, line 31**).

Claim 47

As to claim 47, Matsuda, Miller et al. in view of Toyosato are applied supra, and Matsuda further disclose in figure 1 and 2, wherein said charger is connected to said power supply circuit of said personal computer (**20**) through an internationally standardized interface such as a PCI or a USB (**10**) of said personal computer (**20**).

4. Claims 24, 25 and 48-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Miller et al. (5,818,197) as applied to claim 22 above, and further in view of Singleton (6,501,949).

Claim 24

As to claim 24, Matsuda in view of Miller et al. disclose the elements as claimed except Matsuda in view of Miller et al. fails to teach the limitation of wherein each one of a plurality of said charging processing operation programs is created so as to have a respective charging process operation condition of a rechargeable battery to be subjected to charging processing, being different from each other based upon at least one factor among a rechargeable battery manufacturer name, rechargeable battery

type, model, construction, quantity, battery capacity, and internal resistance and the like.

Singleton shows each of said charging processing operation program is created so as to have a respective charging process operation condition of a secondary cell to be subjected to charging processing, being different from each other based upon at least one factor among a secondary cell manufacturer name, secondary cell type, model, construction, quantity, battery capacity, and internal resistance and the like (refer to col.2, lines 6-9 and col.4, lines 39-42).

It would have been obvious to a person having ordinary skill in the art at the time of the invention was made to modify the device of Matsuda and Miller et al. to include each of said charging processing operation program created so as to have a respective charging process operation condition of a secondary cell to be subjected to charging processing, being different from each other based upon at least one factor among a secondary cell manufacturer name, secondary cell type, model, construction, quantity, battery capacity, and internal resistance and the like as taught by Singleton the purpose of improving current status information about the power source.

Claim 25

As to claim 25, Matsuda, Miller et al in view of Singleton are applied supra, further Singleton shows the charging processing operation program has a function to distinguish at least one information selected from a group of information consisting a manufacturer name, secondary cell type, model, construction, quantity, battery capacity, and internal (refer to col.4, lines 39-42 and col.5, lines 1-10).

Claim 48

As to claim 48, Matsuda in view of Miller et al. disclose the elements as claim 45, except Matsuda in view of Miller et al. fails to teach the limitation of wherein each of said charging processing operation program has mutually different charging processing conditions from each other as set for at least one factor among a rechargeable battery manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery to be subjected to charging processing.

Singleton disclose wherein each of said charging processing operation program has mutually different charging processing conditions from each other as set for at least one factor among a rechargeable battery manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery to be subjected to charging processing. **(see column 2, lines 6-9 and column 4, lines 39-42).**

Matsuda, Miller et al. and Singleton are analogous art because they are from the same field of endeavor of a battery charger for charging the battery.

At the time of the invention it would have been obvious to said charging processing operation program has mutually different charging processing conditions from each other as set for at least one factor among a rechargeable battery manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery to be subjected to charging processing.

The suggestion/motivation for doing so would have been to provide said display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity, charging rate and internal resistance and the like **(see column 2, lines 7-9 of Singleton)**.

Therefore, it would have been obvious to combine Singleton with Matsuda and Miller et al. for the benefit of obvious to said charging processing operation program has mutually different charging processing conditions from each other as set for at least one factor among a rechargeable battery manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery to be subjected to charging processing to obtain the invention as specified in claim 48.

Claim 49

As to claim 49, Matsuda and Miller et al. in view of Singleton are applied supra, and Singleton further disclose wherein said charging processing operation program has a function to distinguish at least one information selected from a group of information consisting of a manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery requiring charging processing inserted in said battery holding apparatus, and further wherein said program having a function in that said distinguished information about said rechargeable battery is displayed on said display means. **(see column 2, lines 8-9 and column 4, lines 43-62)**.

Claim 50

As to claim 50, Matsuda and Miller et al. in view of Singleton are applied supra, and Singleton further disclose wherein said input means is used to display on said display means information regarding a rechargeable battery requiring charging processing inserted into said battery holding apparatus. **(column 4, lines 43-62).**

Claim 51

As to claim 51, Matsuda and Miller et al. in view of Singleton are applied supra, and Singleton further disclose wherein a user, based on information regarding a rechargeable battery requiring charging processing, sets various conditions necessary to be required for charging said rechargeable battery by selecting same from a large number of alternatives displayed on a display screen of said personal computer. **(column 4, lines 43-62).**

Claim 52

As to claim 52, Matsuda and Miller et al. in view of Singleton are applied supra, and Matsuda further disclose wherein, from information regarding said rechargeable battery requiring charging processing recognized by said personal computer, or from information regarding said rechargeable battery requiring charging processing input by a user via said input means, a charging processing operation program having charging processing conditions most suited for said rechargeable battery required charging processing is selected from a plurality of charging processing operation programs stored within said charger. **(see figure 3, 306-311, column 3, line 52 to column 4, line 15).**

Claim 53

As to claim 53, Matsuda and Miller et al. in view of Singleton are applied supra, and Singleton further disclose wherein either various information regarding optimum charging operation conditions for a selected rechargeable battery requiring charging processing or a predicted charging characteristics graph with regard to charging operation conditions for said selected rechargeable battery requiring charging processing can be displayed on said display means of said personal computer. **(column 4, lines 43-62).**

5. Claims 29-33 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Miller et al. (5,818,197) as applied to claim 22 above, and further in view of Anderson (5,982,147).

Claim 31

As to claim 31, Matsuda in view of Miller et al. disclose the elements as claimed except for wherein a predicted charging characteristics graph with regard to charging operation conditions for said selected rechargeable battery requiring charging processing can be displayed on said display means of said personal computer.

Anderson disclose in figure 2, wherein a predicted charging characteristics graph with regard to charging operation conditions for said selected rechargeable battery requiring charging processing can be displayed on said display means of said personal computer. **(see column 7, lines 10-19).**

Matsuda, Miller et al. and Anderson are analogous art because they are from the same field of endeavor of a computer system that includes a battery charger for charging the battery.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to said a predicted charging characteristics graph with regard to charging operation conditions for said selected rechargeable battery requiring charging processing can be displayed on said display means of said personal computer.

The suggestion/motivation for doing so would have been to provide accurate information to a user because it can accurately report its own characteristics. **(see column 2, lines 2-3 of Anderson).**

Therefore, it would have been obvious to combine Anderson with Matsuda and Miller et al. for the benefit of a predicted charging characteristics graph with regard to charging operation conditions for said selected rechargeable battery requiring charging processing can be displayed on said display means of said personal computer to obtain the invention as specified in claim 31.

Claim 32

As to claim 32, Matsuda and Miller et al. in view of Anderson are applied supra, and Anderson further disclose wherein said predicted charging characteristics graph indicates a relationship between a battery voltage and a charging time or a relationship between a battery temperature and a charging time. **(see column 7, lines 10-19 and column 2, lines 52-54).**

Claim 29

As to claim 29, Matsuda and Miller et al. in view of Anderson are applied supra, and Anderson further disclose wherein when a user uses an appropriate input means associated with said personal computer to input information regarding a rechargeable battery requiring charging processing inserted in said battery holding apparatus and display said information on said display means of said personal computer in a case in which at least one information being different from information regarding a rechargeable battery requiring charging processing inserted in said battery holding apparatus is input, an alarm means is driven. **(see column 4, lines 19-27 and column 2, lines 17-49).**

Claim 30

As to claim 30, Matsuda and Miller et al. in view of Anderson are applied supra, and Anderson further disclose wherein a user, based on information regarding a rechargeable battery requiring charging processing, sets various conditions necessary to be required for charging said rechargeable battery by selecting same from a large number of alternatives displayed on a display screen of said personal computer. **(see column 7, lines 10-27).**

Claim 33

As to claim 33, Matsuda and Miller et al. in view of Anderson are applied supra, and Anderson further disclose wherein a display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity, charging rate, and internal resistance and the like with regard to charging operation conditions for said selected rechargeable battery requiring charging

processing, and displays information in that whether it distinguishes the start of charging or charging progress. **(see column 1, lines 16-20, and column 7, lines 20-27).**

Claim 71

As to claim 71, Matsuda and Miller et al. in view of Anderson are applied supra, and Anderson further disclose wherein said charging processing operation program distinguishes at least one part of a manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery requiring charging processing and also displays said information on a display means of said personal computer. **(see column 7, lines 10-19).**

6. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Singleton (6,501,949) and Aritome et al. (JP11023678A).

Claim 37

As to claim 37, Matsuda disclose in figure 1 and 2, a rechargeable battery charging apparatus which comprises; a charger **(see column 1, lines 60-61)**, which is either built into a personal computer or connected directly or indirectly thereto, whereby an internal power supply source of said personal computer **(20)** is used as a power supply for said charger in a charging operation for said rechargeable battery **(30)** , and wherein said charger having built into it a charging processing operation program required for charging of said rechargeable battery **(30)** wherein a charging operation is performed by executing said charging processing operation program selected for said

rechargeable battery(30) to be charged with utilizing an electric power supplied from said internal power supply source (301, figure 3) of said personal computer (20); a battery holding apparatus (30, mobile phone) which holds at least single rechargeable battery to be charged and connected directly or indirectly (USB cable 10) to said charger; a display means connected to said personal computer and displaying at least one information (column 1, lines 40-45) selected from a group consisting information related to a rechargeable battery to be charged, information related to conditions required for charging said rechargeable battery to be charged and information related to past and current charging situation or results of said charging operation (see paragraph bridging column 1 and 2); and an input means connected (2) to said personal computer (20) and for inputting information at least about said respective rechargeable battery to be charged necessary to execute said charging processing operation program (12) into a controller (15) provided in personal computer (20) (see column 1, line 65 to column 2, line 31). Matsuda fails to teach the limitation of wherein said display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity, charging rate and internal resistance and the like; and further wherein, said charging processing operation program is created that is suitable for charging processing of a new rechargeable battery each time a new rechargeable battery is marketed, said program being added to an existing charging processing operation program by updating processing.

Singleton shows said display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity,

charging rate and internal resistance and the like. **(see column 2, lines 6-9 and column 4, lines 39-42).**

Aritome et al. show said charging processing operation program is created that is suitable for charging processing of a new rechargeable battery each time a new rechargeable battery is marketed, said program being added to an existing charging processing operation program by updating processing.

Matsuda, Singleton and Aritome et al. are analogous art because they are from the same field of endeavor of a battery charger for charging the battery.

At the time of the invention it would have been obvious to said display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity, charging rate and internal resistance and the like, and charging processing of a new rechargeable battery each time a new rechargeable battery is marketed.

The suggestion/motivation for doing so would have been to provide said display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity, charging rate and internal resistance and the like **(see column 2, lines 7-9 of Singleton).**

Therefore, it would have been obvious to combine Singleton and Aritome et al. with Matsuda for the benefit of obvious to said display means of said personal computer displays at least one information selected from a manufacturer name, a battery type, battery capacity, charging rate and internal resistance and the like to obtain the invention as specified in claim 37.

7. Claims 38 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Singleton (6,501,949) and Aritome et al. (JP11023678A) as applied to claim 37 above, and further in view of Toyosato (6,532,482).

Claim 38

As to claim 38, Matsuda in view of Singleton and Aritome et al. disclose the elements as claim 37, except Matsuda in view of Singleton and Hideki et al. fails to teach the limitation of **wherein any one of a PCI board or PCI card each forming said PCI interface, a floppy disk, a CD-ROM, or an IC card each of which containing said updated charging processing operation program is distributed to a user for a fee or free- of-charge, said user updating said charging processing operation program in his or her personal computer with said new charging processing operation program.**

Toyosato shows wherein any one of a PCI board or PCI card each forming said PCI interface, a floppy disk, a CD-ROM, or an IC card each of which containing said updated charging processing operation program is distributed to a user for a fee or free-of-charge, said user updating said charging processing operation program in his or her personal computer with said new charging processing operation program.

Matsuda, Singleton, Aritome et al. and Toyosato are analogous art because they are from the same field of endeavor of a computer system that includes a battery charger for charging the battery.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to said wherein any one of a PCI board or PCI card each forming said PCI interface, a floppy disk, a CD-ROM.

The suggestion/motivation for doing so would have been to provides a simple, practical and efficient method for controlling the power generation of a body-worn computer.

Therefore, it would have been obvious to combine Toyosato with Matsuda, Singleton and Aritome et al. for the benefit of inserting a floppy disk, a CD-ROM, or an IC card each containing said charging processing operation program therein to obtain the invention as specified in claim 38.

Claim 70

As to claim 70, Matsuda, Singleton, Aritome et al. in view of Toyosato are applied supra, and Singleton further disclose wherein said charging processing operation program has mutually different charging processing conditions from each other as set for at least one factor among a rechargeable battery manufacturer name, rechargeable battery type, model, construction, quantity, battery capacity, and internal resistance and the like of a rechargeable battery to be subjected to charging processing. **(see column 3, lines 52-53 and column 6, lines 11-23).**

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Singleton (6,501,949) and Aritome et al. (JP11023678A) as applied to claim 37 above, and further in view of Makino et al. (6,850,282).

Claim 35

As to claim 35, Matsuda in view of Singleton and Aritome et al. disclose the elements as claim 37, except Matsuda in view of Singleton and Hideki et al. fails to teach the limitation of **wherein a notification means is provided which, after a start of a prescribed charging processing operation under selected charging conditions with respect to a selected rechargeable battery requiring charging processing, in a case in which said charging operation is completed, makes notification to a user of said completion.**

Makino et al. shows wherein a notification means is provided which, after a start of a prescribed charging processing operation under selected charging conditions with respect to a selected rechargeable battery requiring charging processing, in a case in which said charging operation is completed, makes notification to a user of said completion. **(see column 13, lines 48-62).**

Matsuda, Singleton, Aritome et al. and Makino et al. are analogous art because they are from the same field of endeavor of a computer system that includes a battery charger for charging the battery.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to said charging operation is completed and makes notification to a user of said completion.

The suggestion/motivation for doing so would have been to provide a video camera recorder is connected to personal computer via a cable and edits the sensed image on the personal computer. **(see the paragraph bridging column 1 and 2)**

Therefore, it would have been obvious to combine Makino et al. with Matsuda, Singleton and Aritome et al. for the benefit of makes notification to a user of said completion to obtain the invention as specified in claim 37.

9. Claim 96 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (6,211,649) in view of Singleton (6,501,949) and Aritome et al. (JP11023678A) as applied to claim 37 above, and further in view of Anderson (5,982,147).

Claim 96

As to claim 96, Matsuda in view of Singleton and Aritome et al. disclose the elements as claim 37, except Matsuda in view of Singleton and Hideki et al. fails to teach the limitation of **wherein a real time monitoring operation about an instant charging condition of said rechargeable battery to be charged, is performed with either one of said separate display of a battery voltage and battery temperature or said graph as shown on said display means.**

Anderson disclose in figure 2, wherein a real time monitoring operation about an instant charging condition of said rechargeable battery to be charged, is performed with either one of said separate display of a battery voltage and battery temperature or said graph as shown on said display means. **(see figure 2, column 7, lines 10-19).**

Matsuda, Singleton, Aritome et al. and Anderson are analogous art because they are from the same field of endeavor of a computer system that includes a battery charger for charging the battery.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to said a real time monitoring operation about an instant charging condition of said rechargeable battery to be charged.

The suggestion/motivation for doing so would have been to provide accurate information to a user because it can accurately report its own characteristics. **(see column 2, lines 2-3 of Anderson)**

Therefore, it would have been obvious to combine Anderson with Matsuda, Singleton and Aritome et al. for the benefit of a real time monitoring operation about an instant charging condition of said rechargeable battery to be charged to obtain the invention as specified in claim 96.

Allowable Subject Matter

13. **Claims 86-95, 99-101 are allowed.**

Claim 86

The primary reason for allowance of the Claim 86 is the inclusion of **generating a list thereof; a step of storing said battery list into a prescribed storage means of said personal computer; a step of starting software, including said selected charging processing operation program; a step of inserting a rechargeable battery requiring charging processing into a holding means of said battery; a step of said charging processing operation program distinguishing information with regard to said rechargeable battery requiring a charging operation inserted in said charger, selecting from said battery list a charging processing operation program suitable for a charging operation of said rechargeable battery , and of**

displaying said selected charging processing operation program on said display means, together with a charging graph or other battery information; a step of inputting a number of rechargeable battery to be charged simultaneously; a step of verifying charging conditions on a screen of said display means, and then starting a charging operation; a step during a charging processing operation of either causing drive of an alarm means, which makes notification that a charging processing operation is in progress, or causing a dynamic display of a charging graph on said display means; and a step, in a case in which said charging processing operation on said rechargeable battery is completed, of performing a display indicating that said charging processing operation has been completed.

Claims 89-94 and 99 depend from claim 86 and therefore are allowable for at least the same reasons noted above with respect to claim 86.

Claim 87

The primary reason for allowance of the Claim 87 is the inclusion of **generating a list thereof; a step of storing said battery list into a prescribed storage means of said personal computer; a step of starting software, including said selected charging processing operation program; a step of inserting a rechargeable battery requiring charging processing into said holding apparatus connected to said charger; a step of, in accordance with information with regard to a rechargeable battery requiring charging processing, selecting a charging processing operation program suitable for a rechargeable battery requiring a**

charging processing operation from said battery list; a step of displaying a charging graph; a step of inputting a number of rechargeable battery to be charged simultaneously; a step of verifying charging conditions on a screen of the display means, and then starting a charging operation; a step during a charging processing operation of either causing drive of an alarm means, which makes notification that a charging processing operation is in progress, or causing a dynamic display of a charging graph on said display means; and a step in a case in which said charging processing operation on said rechargeable battery is completed of performing a display indicating that said charging processing operation has been completed.

Claim 100 depend from claim 87 and therefore are allowable for at least the same reasons noted above with respect to claim 87.

Claim 88

The primary reason for allowance of the Claim 88 is the inclusion of **generating a list thereof; a step of storing said battery list into a prescribed storage means of said personal computer; a step of starting software, including said selected charging processing operation program; a rechargeable battery requiring charging processing into said a holding apparatus of said charger; a step of a user using said input means to input separately to said personal computer at least a part of a battery manufacturer name, battery type, battery voltage, battery capacity, charging rate, and internal resistance and the like for a rechargeable battery requiring charging processing; a step of said personal computer selecting**

from said battery list, based on said input information, a charging processing operation program suitable for said rechargeable battery requiring a charging processing operation; a step of displaying a charging graph; a step of inputting a number of rechargeable battery s to be charged simultaneously; a step of verifying charging conditions on a screen of said display means, and then starting a charging operation; a step of inserting a step during a charging processing operation of either causing drive of an alarm means, which makes notification that a charging processing operation is in progress, or causing a dynamic display of a charging graph on said display means; and a step in a case in which said charging processing operation on said rechargeable battery is completed of performing a display indicating that said charging processing operation has been completed.

Claim 101 depend from claim 88 and therefore are allowable for at least the same reasons noted above with respect to claim 88.

Claim 95

The primary reason for allowance of the Claim 95 is the inclusion of a rechargeable battery charging system which comprising the steps of; creating a charging processing operation program used for each one of various kinds of rechargeable battery to be charged, respectively; storing said charging processing created for each one of various kinds to be charged, predetermined memory medium; opening said charging processing operation program to the public through an communication net works or by printing out same on a hard

storing medium; providing said charging processing operation program suitable for an user's intention, when said user having a personal computer had accessed to this system; asking said user to pay a predetermined necessary expenses through a predetermined payment system by a business entity providing said system to the public; providing said charging processing operation program to said user by distributing system or through said communication net works, when said business entity had confirmed that said user had said predetermined expenses through said predetermined payment system; installing or down loading said charging processing operation program by said user into a personal computer owned by said user; performing charging processing operation for a predetermined rechargeable battery by said user utilizing said charging processing operation program; and updating said charging processing operation program by said user with a new version of said charging processing operation program of rechargeable battery respectively, into a operation program which would arbitrarily be down-loaded by said user.

14. Claims 39, 40, 54-61, 71, 72, 77-85, 97 and 98 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The primary reasons for allowance of **Claim 39** in the instant application is the combination with the inclusion in these claims that **wherein said wherein said**

updated charging processing operation program is distributed to a user via a communication system including such as the Internet.

The primary reasons for allowance of **Claim 40** in the instant application is the combination with the inclusion in these claims that **wherein after a user, by means of a pre-established method, made a payment for said charging processing operation program for updating, said user downloads said charging processing operation program via the Internet, and updates said charging processing operation program in his or her personal computer with said new charging processing operation program.**

The primary reasons for allowance of **Claims 54** in the instant application is the combination with the inclusion in these claims that **wherein said predicted charging characteristics graph indicates a relationship between a battery voltage and a charging time or a relationship between a battery temperature and a charging time.**

Claims 55-61 and 97 depend from claim 54 and therefore are allowable for at least the same reasons noted above with respect to claim 54.

The primary reasons for allowance of **Claims 77** in the instant application is the combination with the inclusion in these claims that **wherein a display means of said personal computer displays at least one of a name of a battery manufacturer, a kind of battery, a battery type, battery capacity, quantity thereof, a capacitance thereof, charging rate, a charging power supply and internal resistance and the like with regard to charging operation conditions for said selected rechargeable**

battery requiring charging processing, and a display that distinguishes between the start of charging and charging in progress, and further displays during said charging operation on said rechargeable battery either a separate display of a battery voltage and battery temperature, which vary with the elapse of processing time, or displays a graph indicating a relationship between a battery voltage and a charging time or a relationship between a battery temperature and a charging time.

Claims 72, 73, 78-85 and 98 depend from claim 77 and therefore are allowable for at least the same reasons noted above with respect to claim 77.

: IMPORTANT NOTE :

If the applicant should choose to rewrite the independent claims to include the limitation recited in claims 39, 40, 54 and 77 the applicant is encouraged to amend the **title of the invention** such that it is descriptive of the invention as claimed as required by sec. 606.01 of the **MPEP**. Furthermore, the **Summary of the Invention** and the **Abstract** should be amended to bring them into harmony with the allowed claims as required by paragraph 2 of § 1302.01 of the **MPEP**.

As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 C. F. R. § 1.111(b) and § 707.07 (a) of the **M.P.E.P.**

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571) 272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding are (703) 746-7239, (571) 272-2100 for regular communication and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to receptionist whose telephone number is (571) 272-2100.

LWL
February 24, 2006

Lawrence Luk
examiner
2/24/06